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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,627	07/15/2003	Sungkwon C. Hong	M4065.0956/P956	5664

24998 7590 05/06/2005

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Washington, DC 20037

EXAMINER

PRENTY, MARK V

ART UNIT	PAPER NUMBER
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2822

DATE MAILED: 05/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

87

Office Action Summary	Application No. 10/618,627	Applicant(s) HONG, SUNGKWON C.	
	Examiner MARK V. PRENTY	Art Unit 2822	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 March 2005.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-17 and 26-30 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15, 17 and 26-30 is/are allowed.
- 6) ☒ Claim(s) 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

This Office Action is in response to the amendment filed on March 3, 2005.

The amendment filed on March 3, 2005 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material that is not supported by the original disclosure is as follows: the amendments to the specification's paragraph [0031]. Specifically, paragraph [0031] describes Fig. 5, which clearly illustrates that the floating diffusion capacitor 82 is formed over and covers a portion of floating diffusion node 25. The applicant alleges: "However, the capacitor gate does not necessarily cover the n+ region of the floating diffusion node 25," but the applicant fails to substantiate that allegation. Indeed, the examiner respectfully submits that Fig. 5's "floating diffusion capacitor" 82 is formed over and covers a portion of "floating diffusion node" 25 by definition, as per paragraph [0031]'s own disclosure that "the lower electrode of [floating diffusion] capacitor 82 is the floating diffusion node 25."

Applicant is required to cancel the new matter in the reply to this Office Action.

Fig. 6, a cross-sectional view of Fig. 5's plan view, is objected to because it is inconsistent with Fig. 5. Specifically, Fig. 5's plan view correctly illustrates floating diffusion node 25 extending underneath capacitor 82, but Fig. 6's cross-sectional view does not illustrate floating diffusion node 25 extending underneath capacitor 82. Correction is required (i.e., Fig. 6 should be corrected to show floating diffusion node 25 extending underneath capacitor 82, consistent with Fig. 5's plan view).

The applicant's remarks with respect to the objection to Fig. 6 are not persuasive, for at least the following two reasons.

First, the applicant's remarks and amendments do not squarely address, let alone rebut, the thrust of the objection (i.e., that Fig. 6, a cross-sectional view of Fig. 5's plan view, is inconsistent with Fig. 5). Specifically, the applicant's remark: "To clarify Figure 6, Applicant has amended the Specification," does not address, let alone rebut, the fact that Fig. 6, a cross-sectional view of Fig. 5, remains inconsistent with Fig. 5.

Furthermore, the applicant's remark: "Similarly, the transfer gate 50 is shown [in Fig. 6] covering a portion of the active area of the pixel 210 and over the photodiode 21, but not covering the n-region 26," is misplaced because Fig. 5 does not show transfer gate 50 covering n-region 26 (i.e., while Figs. 5 and 6 are consistent with respect to transfer gate 50 and n-region 26, such has no bearing on Fig. 6 being objected to on the ground that it is inconsistent with Fig. 5 with respect to floating diffusion capacitor 82 and floating diffusion node 25).

Claim 16 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter that was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Specifically, amended claim 16's recitation that the gate capacitor does not cover a portion of the floating diffusion region (as per the applicant's remarks at page 7, first full paragraph) is new matter (see the above new matter objection to the amendment of the specification's paragraph [0031] and the maintained objection to Fig. 6).

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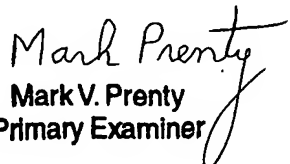
Claims 15, 17 and 26-30 are allowable over the prior art of record.

United States Patent Application Publication 2005/0012168 to Hong is related to this application.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Registered practitioners can telephone the examiner at (571) 272-1843. Any voicemail message left for the examiner must include the name and registration number of the registered practitioner calling, and the Application/Control (Serial) Number. Technology Center 2800's general telephone number is (571) 272-2800.


Mark V. Prenty
Primary Examiner